

# REPORT ON MACHINERY.

No. 28375

Received at London Office

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Date of writing Report 27.2.15 when handed in at Local Office 27.2.15 Port of Hull  
 No. in Survey held at Hull Date, First Survey 3-10-14 Last Survey 24.2.1915  
 Reg. Book. 65 on the Steel. sc: K: Conan Doyle (Number of Volls. 42)  
 Master SUPP. Built at Selby By whom built Cochrane & Sons Ltd Tons {Gross 314 Net 126  
 Engines made at Hull By whom made B. D. Holmes & Coy. Ltd. No 1062 when made 1915-2  
 Boilers made at do By whom made do when made 1915-2  
 Registered Horse Power \_\_\_\_\_ Owners Newington. S. T. Coy Ltd Port belonging to Hull  
 Nom. Horse Power as per Section 28 86 Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted yes

**ENGINES, &c.**—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 13", 23" & 34" Length of Stroke 26" Revs. per minute \_\_\_\_\_ Dia. of Screw shaft 7.91" Material of Iron  
 as per rule \_\_\_\_\_ as fitted 8.4" screw shaft  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight  
 in the propeller boss yes If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive  If two  
 liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush 2'-11 1/2"  
 Dia. of Tunnel shaft 7.04" Dia. of Crank shaft journals 7.39" Dia. of Crank pin 4.5" Size of Crank webs 4 1/4 x 4 3/8" Dia. of thrust shaft under  
 collars 7.5" Dia. of screw 9'-4 1/2" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 33 #  
 No. of Feed pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work   
 No. of Bilge pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work   
 No. of Donkey Engines one x 2 1/2" Sizes of Pumps 6" x 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room two 2" dia. In Holds, &c. five 2" dia. fore peak, fishroom,  
ford sluiceway, reserve bunker, aft sluiceway. (all connected to ejector)  
 No. of Bilge Injections one size 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 1/2" EJECTOR  
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible   
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes  
 What pipes are carried through the bunkers forward Suctions How are they protected wood covered with iron plates  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes  
 Dates of examination of completion of fitting of Sea Connections 26-11-14 of Stern Tube 26-11-14 Screw shaft and Propeller 25-11-14  
 Is the Screw Shaft Tunnel watertight  Is it fitted with a watertight door  worked from \_\_\_\_\_

**BOILERS, &c.**—(Letter for record. S) Manufacturers of Steel Stewart & Lloyds  
 Total Heating Surface of Boilers 1400 Is Forced Draft fitted no No. and Description of Boilers one single ended  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 30-12-14 No. of Certificate 3051  
 Can each boiler be worked separately  Area of fire grate in each boiler 48 # No. and Description of Safety Valves to  
 each boiler two Spring Loaded Area of each valve 4.9 # Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 165 1/2" Length 10'-8" Material of shell plates S  
 Thickness 1 1/4" Range of tensile strength 28 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DOUBLE  
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 7/32" Pitch of rivets 8 1/16" Lap of plates or width of butt straps 17 1/2"  
 Per centages of strength of longitudinal joint 86.4 Working pressure of shell by rules 203 lbs Size of manhole in shell 12 x 16"  
 plate 84.8 Size of compensating ring 7" x 1 1/32" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40"  
 Length of plain part 76" Thickness of plates 13/16" Description of longitudinal joint welded No. of strengthening rings   
 Working pressure of furnace by the rules 210 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 23/32" Top 3/4" Bottom 23/32"  
 Pitch of stays to ditto: Sides 10 x 8" Back 9 1/2 x 8 1/2" Top 11 x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 210  
 Material of stays S Diameter at smallest part 2.04 Area supported by each stay 88 # Working pressure by rules 211. End plates in steam space  
 Material S Thickness 1 1/32" Pitch of stays 19 1/2 x 18" How are stays secured DNXW Working pressure by rules 200 Material of stays S  
 Diameter at smallest part 1.5 Area supported by each stay 351 Working pressure by rules 222 Material of Front plates at bottom S  
 Thickness 1" Material of Lower back plate S Thickness 15/16" Largest washers fitted yes Working pressure of plate by rules 200  
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/8" Material of tube plates S Thickness: Front 1" Back 7/8" Mean pitch of stays 9 3/4"  
 Pitch across wide water spaces 13 3/4" Working pressures by rules 203 Girders to Chamber tops: Material S Depth and  
 thickness of girder at centre 11" x 1 3/4" Length as per rule 35 11/16" Distance apart 11" Number and pitch of stays in each 3 at 8"  
 Working pressure by rules 207 Superheater or Steam chest; how connected to boiler \_\_\_\_\_ Can the superheater be shut off and the boiler worked  
 separately \_\_\_\_\_ Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet  
 holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 If stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_  
 Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts and nuts, one set of feed, bilge & air pump valves, one safety valve spring, one main & one donkey feed check valve, and a quantity of bolts & nuts & iron of assorted sizes.

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & Co. LTD.

Charles Holmes

DIRECTOR

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1914: - Oct 3, 19, 23, 29 Nov 3, 9, 11, 18, 19, 23, 25, 26, 27, 30 Dec 3, 7, 10, 14, 18, 22, 24. During erection on board vessel - 30, 1915: - Jan 5, 6, 11, 14, 21, 22, 25, 26, 27 Feb 1, 4, 9, 10, 12, 15, 18, 23, 24. Total No. of visits 42. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts - Cylinders 7/12 & 12-14 Slides 25-1-15 Covers 25-1-15 Pistons 7/18-12-14 Rods 21-1-15

Connecting rods 22-1-15 Crank shaft 19-11-14 Thrust shaft 18-12-14 Tunnel shafts Screw shaft 19-11-14 Propeller 25-11-14

Stern tube 29-11-14. Steam pipes tested 11-2-15 Engine and boiler seatings 26-11-14. Engines holding down bolts 1-2-15.

Completion of pumping arrangements 24-2-15 Boilers fixed 9-2-15. Engines tried under steam 18-2-15

Main boiler safety valves adjusted 18-2-15 Thickness of adjusting washers 3/8" both.

Material of Crank shaft Iron Identification Mark on Do. 1895 F.L.S. Material of Thrust shaft S Identification Mark on Do. 1404 F.L.S.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 1898 F.L.S.

Material of Steam Pipes Solid drawn Copper. Test pressure 400 lbs sq. in.

Is an installation fitted for burning oil fuel. Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with. Is this machinery duplicate of a previous case. No. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under special Survey, in accordance with the approved plan & rules of this society, the materials and workmanship are good, the boiler and steam pipe have been tested as above & found sound and good, the machinery & boiler have been properly fitted and secured to place on board and on completion tried under steam and the safety valves adjusted and tested for accumulation and found satisfactory. In my opinion this vessel is eligible for record of +LMC 2-15.

It is submitted that this vessel is eligible for THE RECORD + LMC 2-15.

J.W.R. 27/3/15. J.M. J. Roberts Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Certificate (if required) to be sent to

The amount of Entry Fee ... £ 1 : - : When applied for, 26-3-1915. Special ... £ 12 : 18 : Donkey Boiler Fee ... £ Travelling Expenses (if any) £ 8/2 : 30 Mar 1915.

Committee's Minute TUE. MAR. 30. 1915. Assigned + LMC 2.15

